

Contributions to the Knowledge of the Quediina (Coleoptera, Staphylinidae, Staphylinini) of China

Part 24. Genus *Quedius* STEPHENS, 1829.
Subgenus *Microsaurus* DEJEAN, 1833. Section 14

Aleš SMETANA

Agriculture and Agri-Food Canada, Research Branch, Central Experimental Farm,
K. W. Neatby Bldg., Ottawa, Ontario K1A 0C6, Canada

Abstract Taxonomic and faunistic data on the species of the genus *Quedius* subgenus *Microsaurus*, from the People's Republic of China are provided. Seven species are described as new: *Q. cavazzutii* (Sichuan), *Q. shuang* (Sichuan), *Q. koen* (Yunnan), *Q. cingulatus* (Sichuan), *Q. janatai* (Sichuan), *Q. lih* (Sichuan), and *Q. euanderoides* (Yunnan). The entire, undamaged aedoeagi of *Q. guey* and *Q. songpan* are illustrated for the first time. *Quedius inquietus* and *Q. guey* are for the first time recorded from Hubei.

Quedius (Microsaurus) inquietus (CHAMPION)

Velleius inquietus CHAMPION, 1925, 107.

Quedius inquietus: SMETANA, 1997 c, 129.

New record. China: [Hubei]: Dashennongjia mts., 2100–2900 m, 31.5N 110.3E, 10.–14.6.2002, leg. J. Turna, (1), in the Naturhistorisches Museum, Wien, Austria.

Comments. This is the first record of this species from Hubei.

Quedius (Microsaurus) beelsoni CAMERON

Quedius beelsoni CAMERON, 1932, 285.

New record. China: [Fujian]: Wuyi Shan, ca 2 km NW Tongmu vill., 27.75N 117.66E, ca 800 m, 30.V.2001, inside rotting *Phyllostachys pubescens* (bamboo) shoot, J. Cooter and P. Hlaváč leg. (3), in deROUGEMONT and SMETANA collections.

Comments. The species was previously known from Fujian; the habitat record is interesting and worth of publishing.

Quedius (Microsaurus) farkaci SMETANA

Quedius farkaci SMETANA, 1997, 464.

New record. China: [Sichuan]: Ganzi Tibetan Auton. Pref. Litang Co., Shaluli Shan, 25 km NW Litang 30.17.23N 90.30.97E, 4300 m, Abies-Forest-Rest, 3.VII.1999,

leg. A. Pütz (8), in PÜTZ and SMETANA collections.

Comments. This is the second record of this species from Shaluli Shan (see SMETANA, 2001 a, 183). *Quedius farkaci* is at present known from three main mountain ranges, i.e. from Chola Shan on the Tibet-Sichuan border in the north, through Shaluli Shan in Sichuan to Xue Shan in northern Yunnan in the south. This is an unusually large distributional range for a flightless species that occurs in habitats at very high elevations around 4,000 m (see above and SMETANA, 2001 a, 183). However, this may be due to the fact that the three mountain ranges are situated just to the east of the Jinsha Jiang river and apparently belong to the same mountain system.

***Quedius (Microsaurus) tronqueti* SMETANA**

Quedius tronqueti SMETANA, 1999 a, 238.

New record. China: [Sichuan]: 53 km NW Lixian, 2750–3000 m, VII.2001, leg. S. Murzin (1), in the SMETANA collection.

Comments. The species was at present known only from the type locality in Jiuding Shan (see SMETANA, 1999 a, 239).

***Quedius (Microsaurus) guey* SMETANA**

(Fig. 1)

Quedius guey SMETANA, 2001 a, 188.

New record. China: [Hubei]: Dashennongjia mts., 2100–2900 m, 31.5N 110.3E, 10.–14.6.2002, leg. J. Turna (1 ♂), in Naturhistorisches Museum, Wien, Austria.

Comments. The aedoeagus of the holotype (the only male known so far) was damaged (see SMETANA, 2001, 190). The undamaged aedoeagus of the above Hubei specimen is therefore illustrated here (Fig. 1). Note that there are four sensory peg setae along each margin of the medioapical emargination of the paramere of the aedoeagus of this specimen (three in the holotype).

This is the first record of this species from Hubei.

***Quedius (Microsaurus) songpan* SMETANA**

(Fig. 2)

Quedius songpan SMETANA, 1999 b, 547.

New record. China: [Sichuan]: pass btw. Pingwu and Nanping, 3100 m, 22.8.1999, Cavazzuti leg. (19), in the SMETANA collection.

Comments. The above locality lies in the same general area in northern Sichuan as the type locality of *Q. songpan* (Songpan, Lacs Erdao — see SMETANA, 1999 c, 550).

The holotype of this species was the only male known until now. The aedoeagus

of the holotype was received damaged and was therefore not illustrated in the usual way; also, the relations between the apical portions of the median lobe and the paramere remained unknown (see SMETANA, *l.c.*, 550). The entire, undamaged aedoeagus is illustrated here (Fig. 2). Note the brief bilateral dilatation of the median lobe in front of the basal bulbous that does not appear in the original illustration, and some additional sensory peg setae on the apical portion of the underside of the paramere of this specimen (SMETANA, *l.c.*, 549, fig. 30).

***Quedius (Microsaurus) bohemosorum* SMETANA**

Quedius bohemosorum SMETANA, 1997b, 461.

New record. China: [Yunnan]: Zhongdian Co., Mts. 17 km NW of Zhongdian, 3500–4000 m, 27.53.56N 99.33.37E, 15.–23.5.1999, L. & R. Businský (1); Bai Ma Xue Shan, 35 km S Deqen, 4300–4800 m, 24.VI.1998, S. Murzin (1). Both in SMETANA collection.

Comments. It should be noted that some specimens of this species have three punctures at the posterior margin of the head, mostly unilaterally. The species was at present known only from the type locality in Xue Shan near Zhongdian. It is likely that the first record given above refers to Xue Shan.

***Quedius (Microsaurus) cavazzutii* sp. nov.**

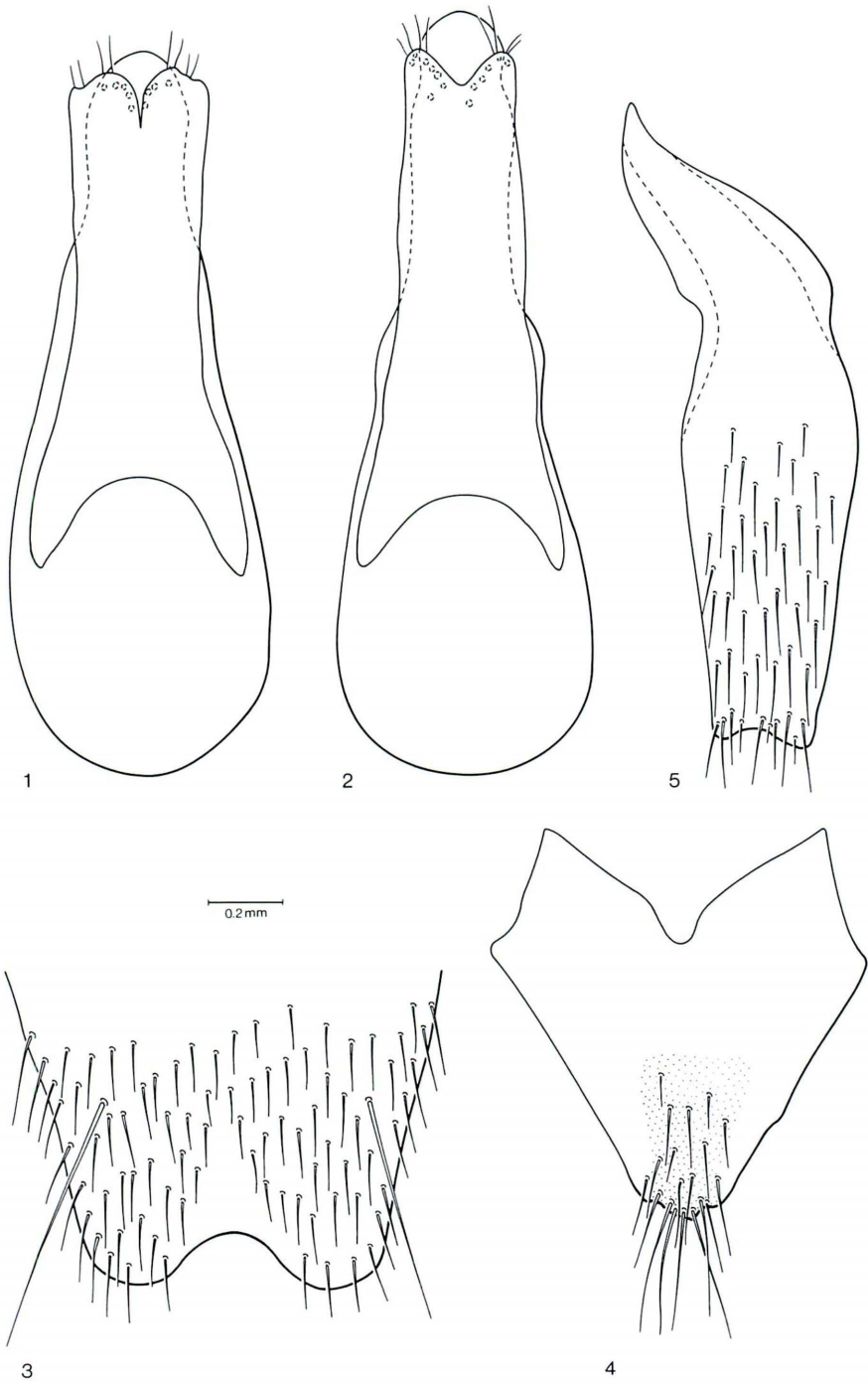
(Figs. 3–9)

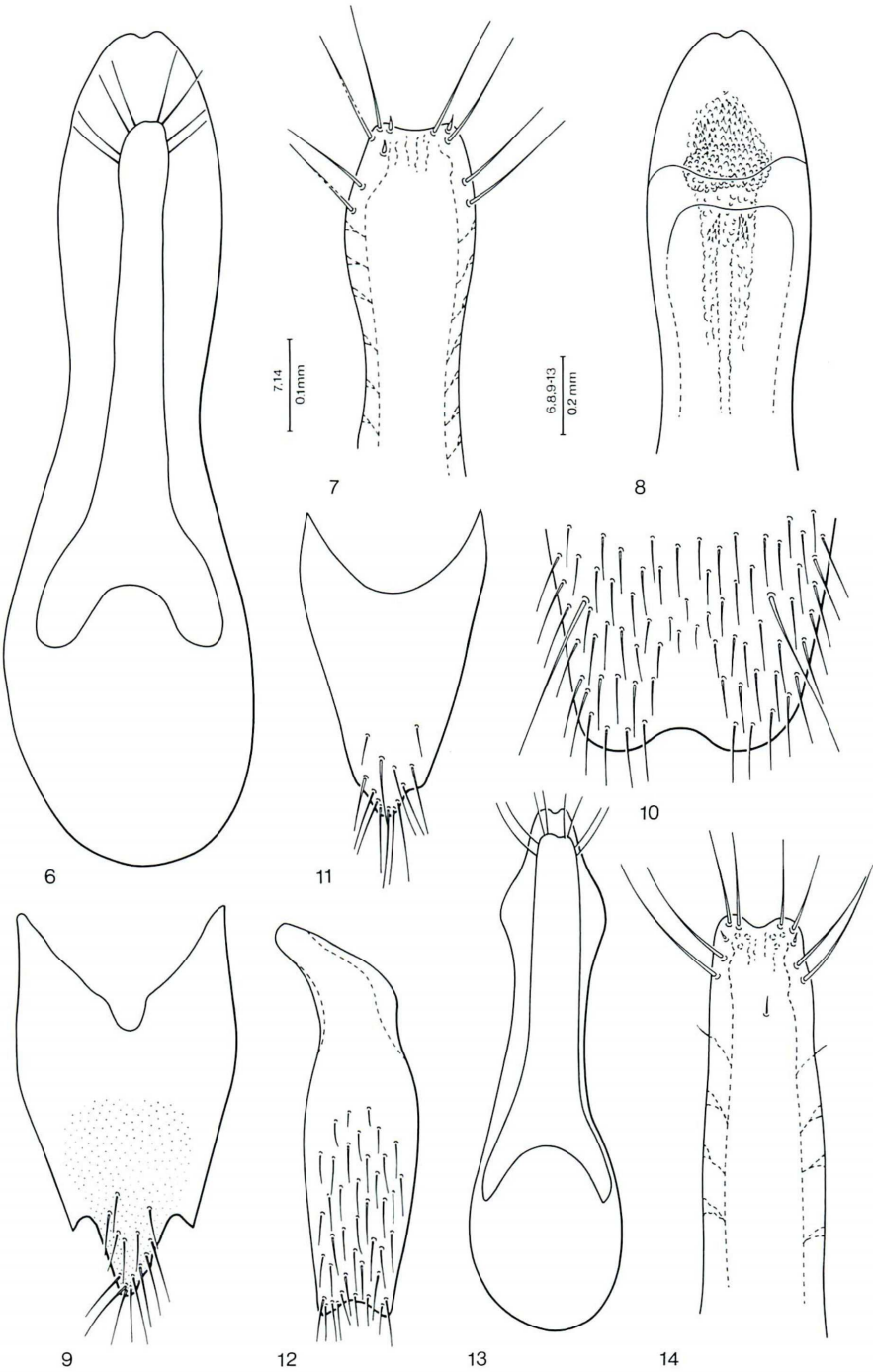
Description. In all characters very similar to *Q. bohemosorum* SMETANA, 1997b and different only by the male and female sexual characters.

Male. First four segments of front tarsus considerably dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.35); segment 4 narrower than preceding segments. Sternite 8 apparently with two long setae on each side (but only one is traceable by the presence of the insertion sockets, see Comments); with moderately wide and deep, almost arcuate medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 3). Genital segment with tergite 10 short and wide, markedly narrowed toward fairly wide, irregular apex, apex with several long setae and with a few much shorter setae in front of them (Fig. 4); sternite 9 with large basal portion, with apex

Figs. 1–5 (on p. 88). — 1, *Quedius guey*: aedoeagus, ventral view. — 2, *Quedius songpan*: aedoeagus, ventral view. — 3–5. *Quedius cavazzutii*: 3, apical portion of male sternite 8; 4, tergite 10 of male genital segment; 5, sternite 9 of male genital segment.

Figs. 6–14 (on p. 89). — 6–9. *Quedius cavazzutii*: 6, aedoeagus, ventral view; 7, apical portion of underside of paramere; 8, apical portion of median lobe with internal sac, paramere removed; 9, tergite 10 of female genital segment. — 10–14. *Quedius shuang*: 10, apical portion of male sternite 8; 11, tergite 10 of male genital segment; 12, sternite 9 of male genital segment; 13, aedoeagus, ventral view; 14, apical portion of underside of paramere.





widely emarginate, without differentiated apical or subapical setae (Fig. 5). Aedoeagus (Figs. 6–8) markedly larger and more robust than that of *Q. bohemorum*; median lobe with apical portion wider and quite symmetrical, with base differently shaped. Paramere similar to that of *Q. bohemorum*, but longer, with apex farther below apex of median lobe than in *Q. bohemorum* (see Fig. 23 in SMETANA, 1997 b). Internal sac different from that of *Q. bohemorum* (see fig. 25 in SMETANA, 1997 b).

Female. First four segments of front tarsus similar to those of male, but less dilated; segment two only vaguely wider than apex of tibia (ratio 1.1). Genital segment without setose accessory sclerite; tergite 10 quite different from that of *Q. bohemorum* (fig. 29 in SMETANA, 1997 b), slightly pigmented medioapically, with deeply, angulately differentiated apical portion (Fig. 9).

Length 8.5–9.8 mm.

Type material. Holotype (male) and allotype (female): China: “CHINA: N Sichuan pass btw. Pingwu and Nanping 3100 m 22.8.1999 Cavazzuti”. In the SMETANA collection, Ottawa, Canada.

Paratypes: China: [Sichuan]: same data as holotype, 2♂♂, 3♀♀, in the SMETANA collection.

Recognition and comments. *Quedius cavazzutii* is a member of the *Apicicornis*-Group (SMETANA, 2001 b, 207). It belongs to the subgroup of the brachypterous species (the wings in *Q. cavazzutii* are considerably reduced and form short stumps, each only slightly exceeding the apical margin of the elytron when extended) lacking the whitish apical seam of palisade setae on abdominal tergite 7 (fifth visible). Until now only two species (*Q. kucerai* SMETANA, 1996 and *Q. vafer* SMETANA, 1997 a) belonged to this subgroup, but two additional species are described in this paper (see below). *Quedius cavazzutii* differs from all of them by the different male sexual characters, particularly by the different shape of the aedoeagus. The male of *Q. vafer* is not known at present, but tergite 10 of the female genital segment of *Q. vafer*, although similar to that of *Q. cavazzutii*, is distinctly different (see fig. 1 in SMETANA, 1997 a).

The aedoeagus of *Quedius cavazzutii* is surprisingly similar to that of *Q. bito* SMETANA, 1996 a, but it is larger and robuster and differs in some details of the configuration of the apical portion, as well as by the different internal sac (see figs. 13, 15 in SMETANA, 1996 a). In addition, *Q. bito* differs by several external characters, such as larger and more robust body, different coloration (apex of the abdomen), longer elytra, fully developed wings and the presence of the whitish apical seam of palisade setae on abdominal tergite 7.

Due to the apparently prolonged exposure to the pitfall trap fluids, some of the paratypes are missing some appendages (one female paratype is missing both antennae except for both first segments), and the pubescence on the elytra and/or on the abdomen, including the long setae, is affected/missing.

Etymology. Patronymic, the species was named in honor of the collector of the holotype, Dr. P. CAVAZZUTI, Milano, the renowned Italian specialist of Carabidae, who collected the specimens of the original series.

Quedius (Microsaurus) shuang sp. nov.

(Figs. 10–14)

Description. In all characters very similar to *Q. kucerai* SMETANA, 1996 and different only by the slightly smaller body size and narrower body form, and by the male sexual characters.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.18); segment 4 narrower than preceding segments. Sternite 7 not modified, with apical margin only vaguely concave. Sternite 8 apparently with two long setae on each side (but only one is traceable by the insertion sockets, see Comments); with moderately wide and deep, almost arcuate medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 10). Genital segment with tergite 10 similar to that of *Q. kucerai*, but with apical portion slightly differentiated, with setae as in Fig. 11; sternite 9 similar to that of *Q. kucerai* in shape and setation, but with apex more distinctly, arcuately emarginate (Fig. 12). Aedoeagus (Figs. 13, 14) markedly smaller than that of *Q. kucerai* (length ratio 0.80); median lobe with dilated preapical portion more rounded laterally and with apical portion narrower with more distinctly, narrowly emarginate apex. Paramere markedly narrower, almost exactly parallel-sided (it is gradually, slightly widened anteriad in *Q. kucerai*), slightly emarginate apex distinctly not reaching apex of median lobe; two setae at apex at each side of emargination and two similar setae at each lateral margin below apex; underside of paramere without sensory peg setae. Internal sac without larger sclerotized structures, not appreciably different from that of *Q. kucerai*.

Female. Not known.

Length 7.7 mm.

Type material. Holotype (male); China: "CHINA: N Sichuan pass btw. Pingwu and Nanping 3100 m 22.8.1999 Cavazzuti". In the SMETANA collection, Ottawa, Canada.

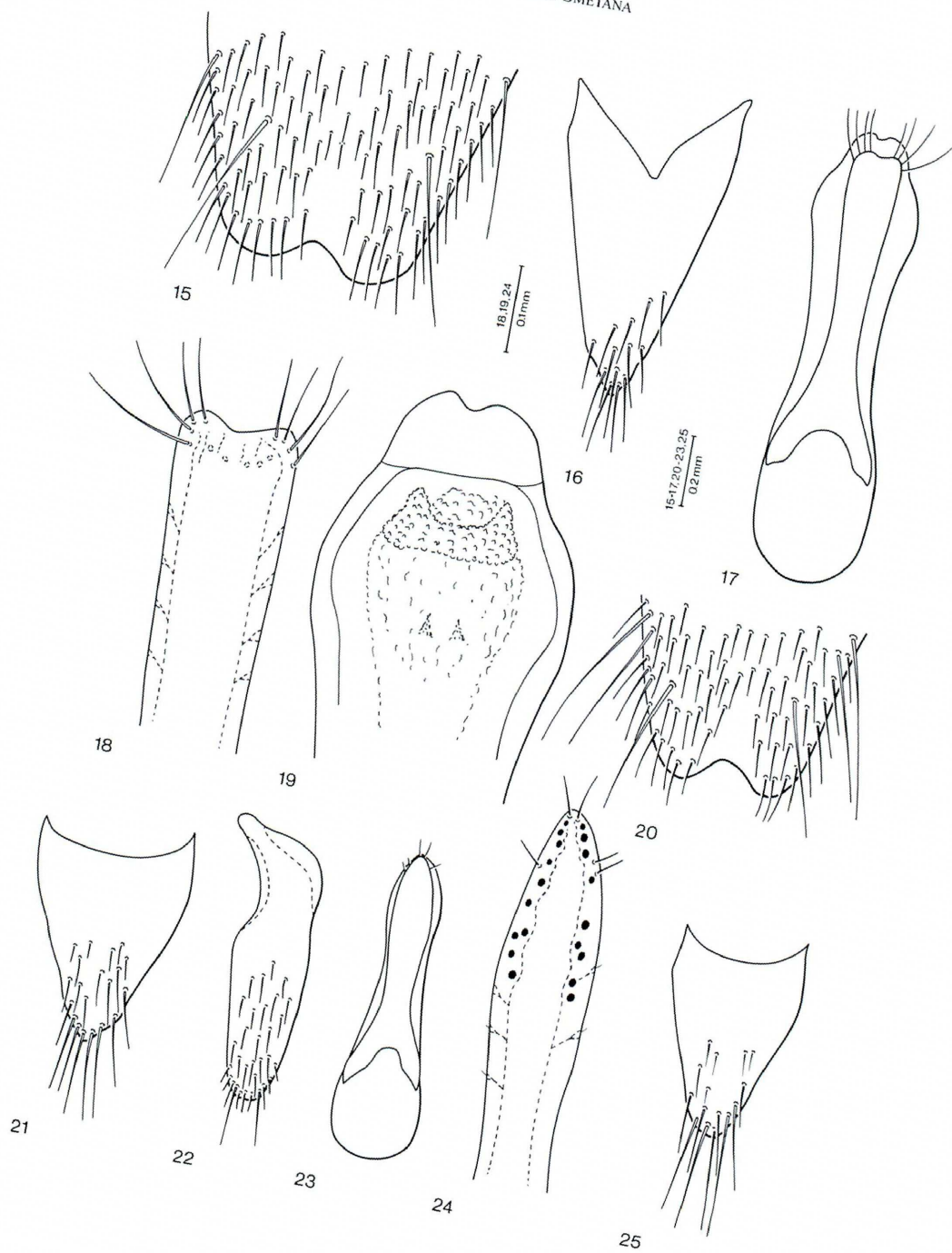
Paratype (male): China" [Sichuan]: same data as holotype. In the SMETANA collection.

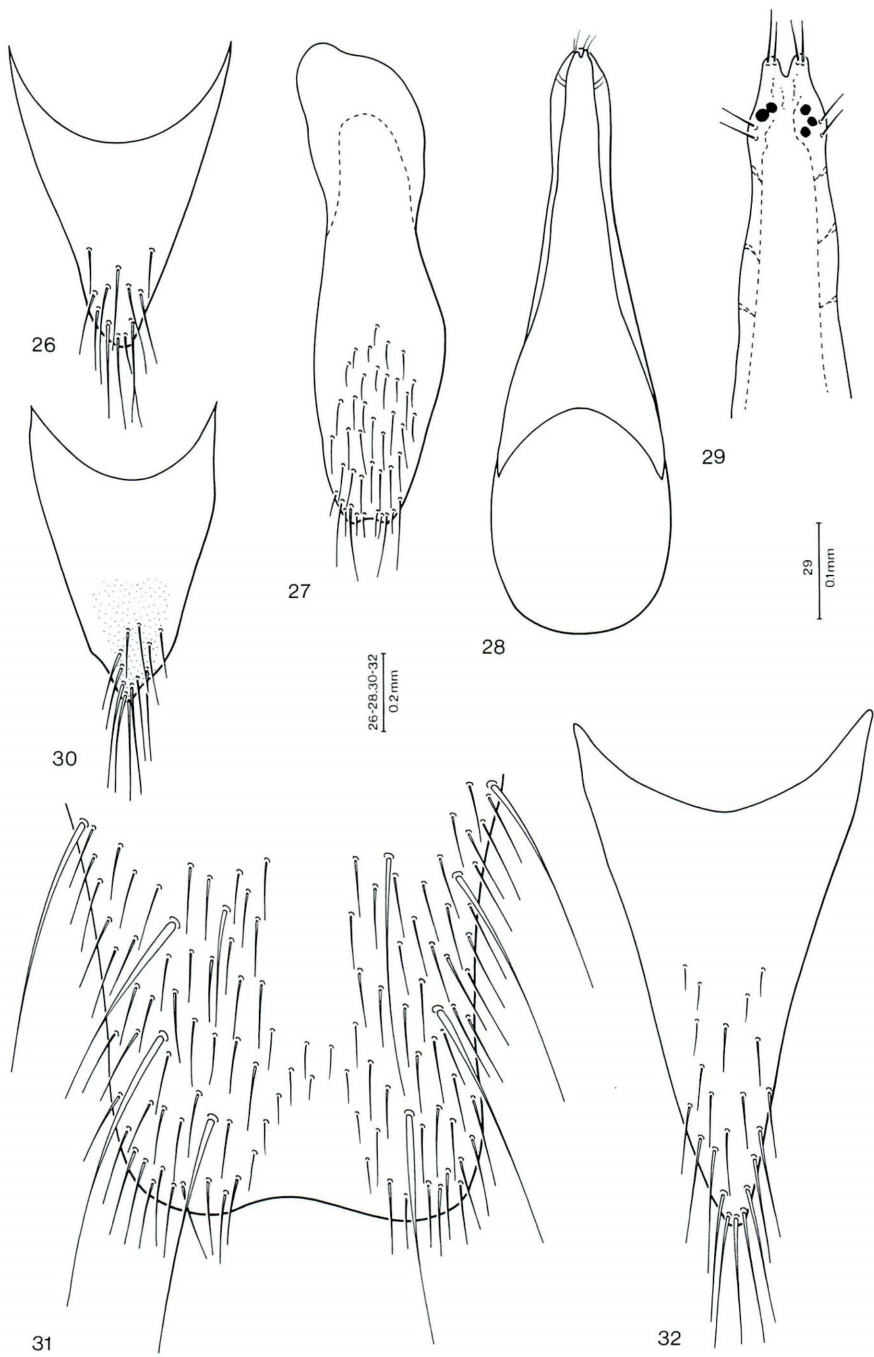
Geographical distribution. *Quedius shuang* is at present known only from the type locality in north-central Sichuan.

Figs. 15–25 (on p. 92). — 15–19. *Quedius koen*: 15, apical portion of male sternite 8; 16, tergite 10 of male genital segment; 17, aedoeagus, ventral view; 18, apical portion of underside of paramere; 19, apical portion of median lobe with internal sac, paramere removed. — 20–25. *Quedius cingulatus*: 20, apical portion of male sternite 8; 21, tergite 10 of female genital segment; 22, sternite 9 of male genital segment; 23, aedoeagus, ventral view; 24, apical portion of underside of paramere; 25, tergite 10 of male genital segment.

Figs. 26–32 (on p. 93). — 26–30. *Quedius janatai*: 26, tergite 10 of male genital segment; 27, sternite 9 of male genital segment; 28, aedoeagus, ventral view; 29, apical portion of underside of paramere; 30, tergite 10 of female genital segment. — 31–32. *Quedius lih*: 31, apical portion of male sternite 8; 32, tergite 10 of male genital segment.

Aleš SMETANA





Bionomics. The specimens were taken from pitfall traps, but nothing is known about the habitat the traps were set in.

Recognition and comments. *Quedius shuang* is a member of the *Apicicornis*-Group (SMETANA, 2001 b, 207). It belongs to the subgroup of the brachypterous species lacking the whitish apical seam of palisade setae on abdominal tergite 7 (fifth visible). It is closely related and quite similar to *Q. kucerai*, but it can be distinguished from it by the male sexual characters, and also by the wide geographical isolation. Originally, I hesitated to assign the two specimens to a separate species. However, since the shape of the aedeagus is constant in all males of both species I have seen, and since the two flightless populations are geographically separated from each other by the vast area of the entire territory of the province of Sichuan, I believe that they represent two separate species.

Due to the apparently prolonged exposure to the pitfall trap fluids, the setation of the terminal abdominal segments is largely missing in the two specimens of the original series. The presence of the long setae on sternite 8 was therefore traced by their insertion sockets.

The paratype is missing the entire right antenna, except for the first segment, and the entire middle left leg.

Etymology. The specific epithet is the Chinese word “shuang”, which in one of its meanings means “a pair”. It refers to the close relationship of the species with *Q. kucerai*.

***Quedius (Microsaurus) koen* sp. nov.**

(Figs. 15–19)

Description. In all characters very similar to *Q. kucerai* SMETANA, 1996 and different only by the male sexual characters.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.12); segment 4 narrower than preceding segments. Sternite 7 not modified, with apical margin only vaguely concave. Sternite 8 with two long setae on each side (but only one is traceable by the insertion sockets, see Comments); with moderately wide and deep, obtusely triangular medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 15). Genital segment with tergite 10 similar to that of *Q. kucerai*, with setae as in Fig. 16; sternite 9 not appreciably different from that of *Q. kucerai*. Aedeagus (Figs. 17–19) markedly smaller than that of *Q. kucerai* (length ratio 0.78); median lobe with dilated preapical portion more rounded laterally and with apical portion considerably shorter with minute medioapical emargination. Paramere shorter, but otherwise of similar shape as that of *Q. kucerai* (i.e. gradually, slightly widened anteriorly), with slightly emarginate apex distinctly not reaching apex of median lobe; two setae at apex at each side of emargination and two similar setae at each lateral margin close to apex; underside of paramere without sen-

sory peg setae. Internal sac without larger sclerotized structures, as in Fig. 19.

Female. Not known.

Length 7.8 mm.

Type material. Holotype (male); China: "CHINA: NW Yunnan Bai Ma Xue Shan, 35 km S Degen 4300–4800 m 24.VI.1998, S. Murzin". In the SMETANA collection, Ottawa, Canada.

Geographical distribution. *Quedius koen* is at present known only from the type locality in northernmost Yunnan, west of the Jinsha Jiang river (see Comments).

Bionomics. The specimen was taken from pitfall traps, but nothing is known about the habitat the traps were set in.

Recognition and comments. *Quedius koen* is a member of the *Apicicornis*-Group (SMETANA, 2001 b, 207). It belongs to the subgroup of the brachypterous species lacking the whitish apical seam of palisade setae on abdominal tergite 7 (fifth visible). It is closely related and quite similar to *Q. kucerai*, but it can be distinguished from it by the male sexual characters, particularly by the markedly different shape of the aedoeagus, and also by the geographical isolation. Originally, I hesitated to assign the specimen to a separate species. However, since the shape of the aedoeagus is constant in all males of *Q. kucerai* I have seen, and since the two flightless populations are geographically separated from each other by the Jinsha Jiang river, I believe that they represent two separate species.

The name of the type locality is correctly spelled "Dêqên

Etymology. The specific epithet is the Chinese word "koen", which means "to tie, to bind". It refers to the close relationship of the species with *Q. kucerai*.

Quedius (Microsaurus) cingulatus sp. nov.

(Figs. 20–25)

Description. Head black, pronotum piceous-black with lateral portions markedly paler, yellowish, elytra brunneous to dark brunneopiceous with variably paler apical margin, surface with slight metallic sheen, abdomen distinctly iridescent, piceous-black with narrowly paler apical margins of tergites; maxillary and labial palpi dark brunneous to piceous, antennae piceous with first three segments inconspicuously, partially paler, legs brunneopiceous to piceous with slightly paler tarsi. Head rounded, slightly wider than long (ratio 1.21), markedly narrowed posteriad behind eyes, posterior angles entirely obsolete; eyes large and convex, tempora much shorter than eyes seen from above (ratio 0.37); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to posteriomedial margin of eye, separated from it by distance about equal to diameter of puncture, two punctures between it and posterior margin of head, situated close to posterior margin, one additional puncture between posterior frontal puncture and temporal puncture, situated at posterior margin of eye; temporal puncture separated from posterior margin of eye by distance about equal to diameter of puncture; tempora with some fine punctures; sur-

face of head with dense, extremely fine and partially rudimentary, superficial microsculpture of transverse waves with fairly frequent longitudinal junctions. Antenna rather short, moderately widened toward apex, segment 3 slightly longer than segment 2 (ratio 1.17), segments 4 and 5 longer than wide, following segments gradually becoming shorter, outer segments slightly wider than long, last segment about as long as preceding two segments combined. Pronotum slightly wider than long (ratio 1.09), widest around, slightly more narrowed anteriorly than posteriorly, with lateral margins continuously arcuate with broadly rounded base, transversely convex, lateral portions not explanate; dorsal rows each with three punctures; sublateral rows each with two or three punctures, posterior puncture situated behind level of large lateral puncture; microsculpture similar to that on head mostly somewhat denser and more pronounced. Scutellum impunctate, with very fine and dense microsculpture of transverse waves. Elytra relatively long, at base slightly narrower than pronotum at widest point, scarcely widened posteriorly, at suture slightly (ratio 1.13), at sides distinctly longer than pronotum at midline (ratio 1.25); punctuation and pubescence moderately fine and moderately dense, transverse interspaces between punctures mostly larger than diameters of punctures; pubescence dark brownish; surface between punctures without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) bearing fine whitish apical seam of palisade fringe; punctuation of abdominal tergites finer and markedly denser than that on elytra, becoming sparser toward apical margin of each tergite and in general toward apex of abdomen; pubescence brownish; surface between punctures with excessively fine and dense microsculpture of transverse striae.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified, long pale setae ventrally; segment 2 slightly wider than apex of tibia (ratio 1.10); segment 4 narrower than preceding segments. Sternite 8 with three long setae on each side, with moderately wide, rather deep, obtusely triangular medioapical emargination, triangular area before emargination flattened and smooth (Fig. 20). Genital segment with tergite 10 triangular, narrowly arcuate apically, with several setae at and near apical margin, and with much smaller setae in front of them (Fig. 25); sternite 9 with moderately large basal portion, apical portion broadly arcuate apically, with fine apical setae and two distinctly differentiated apical setae, and with remaining setation fine and sparse (Fig. 22). Aedoeagus (Figs. 23, 24) small; median lobe rather narrow in middle portion, anteriorly dilated into apical portion with subacute apex. Paramere elongate, anteriorly fusiform, with subacute apex just about reaching apex of median lobe; two fine apical setae and two (left margin) and one (right margin) somewhat smaller setae below apex, with sensory peg setae forming two irregular lateral rows. Internal sac simple, without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but markedly less dilated; segment 2 slightly narrower than apex of tibia (ratio 0.88). Genital segment with tergite 10 triangular, with fairly acute apex, with six or seven long apical setae and with a few much shorter setae in front of them (Fig. 21).

Length 5.6–6.5 mm.

Type material. Holotype (male) and allotype (female): China: “CHINA, Prov. Sichuan Ganzi Tibetan Auton. Pref. Yajiang Co., Shaluli Shan E Pass, 15 km W Yajiang”/“4300 m, Rhododendron silt 30.00,24N, 100.51,63E, 4.VII.1999, leg. A. Pütz”/“Sammlung Andreas Pütz Eisenhüttenstadt”. Holotype temporarily in the SMETANA collection, Ottawa, Canada (to be eventually deposited in the Muséum d’Histoire naturelle, Geneva, Switzerland); allotype in the PÜTZ collection, Eisenhüttenstadt, Germany.

Paratypes: same data as holotype, 14♀♀ in the PUTZ (9) and SMETANA (5) collections.

Geographical distribution. *Quedius cingulatus* is at present known only from the type locality in Shaluli Shan in western Sichuan.

Bionomics. The specimens of the original series were apparently taken by sifting debris under rhododendron bushes.

Recognition and comments. *Quedius cingulatus* is a member of the *Euryalus* Group (see SMETANA, 2001 b, 208). It is at present the smallest species of this group. It is distinctive due to its small size, the coloration of the pronotum and the densely punctate abdominal tergites, in combination with the shape of the aedoeagus.

It is rather curious that only one male is present in the original series.

Etymology. The specific epithet is the Latin adjective *cingulatus*, -a, -um. It refers to the coloration of the pronotum of the species.

***Quedius (Microsaurus) janatai* sp. nov.**

(Figs. 26–30)

Description. In all characters similar to *Q. zheduo* SMETANA, 1999 a and different mainly by both male and female sexual characters.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.18); segment 4 narrower than preceding segments. Sternite 7 not modified, with apical margin only vaguely concave. Genital segment with tergite 10 triangular, narrowly arcuate apically, with a few setae apically and several shorter setae in front of them (Fig. 26); sternite 9 with basal portion very wide, apical portion slightly emarginate medioapically, with fine short setae medioapically and with four slightly differentiated apical/subapical setae (Fig. 27). Aedoeagus (Figs. 28, 29) rather large, elongate; median lobe narrowed anteriorly in almost straight line to about apical third, from there parallel-sided to narrowly subarcuate apex; paramere large, with wide, robust basal portion and from there in general narrow and vaguely bisinuate narrowed anteriorly, apical portion somewhat differentiated with slightly concave lateral margins and with apex minutely, narrowly emarginate in middle; apex of paramere about reaching apex of median lobe; two setae at each side of apical emargination and two similar setae at each lateral margin far from apex; five sensory peg setae on underside of paramere, three and two at each lateral margin below apex; internal sac without larger scler-

rotized structures.

Female. First four segments of front tarsus similar to those of male, but less dilated; segment 2 about as wide as apex of tibia. Genital segment with tergite 10 markedly pigmented, in general similar to that of *Q. zheduo*, but somewhat narrower and longer (Fig. 30).

Length 5.8–6.2 mm.

Type material. Holotype (male) and allotype (female): China: “CHINA SW Sichuan Sabde 30°22'N 102°16'E 3400 m, 6.7.2001 M. Janata leg.”. In the SMETANA collection, Ottawa, Canada.

Geographical distribution. *Quedius janatai* is at present known only from the type locality in west-central Sichuan, which is in straight line about 90 km SW from the pass Zheduo Shankou, the type locality of *Q. zheduo*.

Bionomics. Nothing is known about the collection circumstances of the specimens of the original series.

Recognition and comments. *Quedius janatai* may be distinguished from *Q. zheduo* by the sexual characters mentioned above, particularly by the absence of the secondary sexual characters on male abdominal sternite 7, and by the distinctly different aedoeagus (Figs. 28, 29 and figs. 47–50 in SMETANA, 1999 a, 233, 237). *Quedius janatai* shares the absence of the secondary sexual characters on male sternite 7 with *Q. tronqueti* SMETANA, 1999 a, but it differs from it by the quite different aedoeagus (Figs. and figs. 55–57 in SMETANA, 1999 a, 237).

The holotype was received with sternite 7 almost destroyed, therefore it could not be described and illustrated, and also the number of long setae on it remains unknown; however, it is very likely that they are equally numerous as those in *Q. zheduo*.

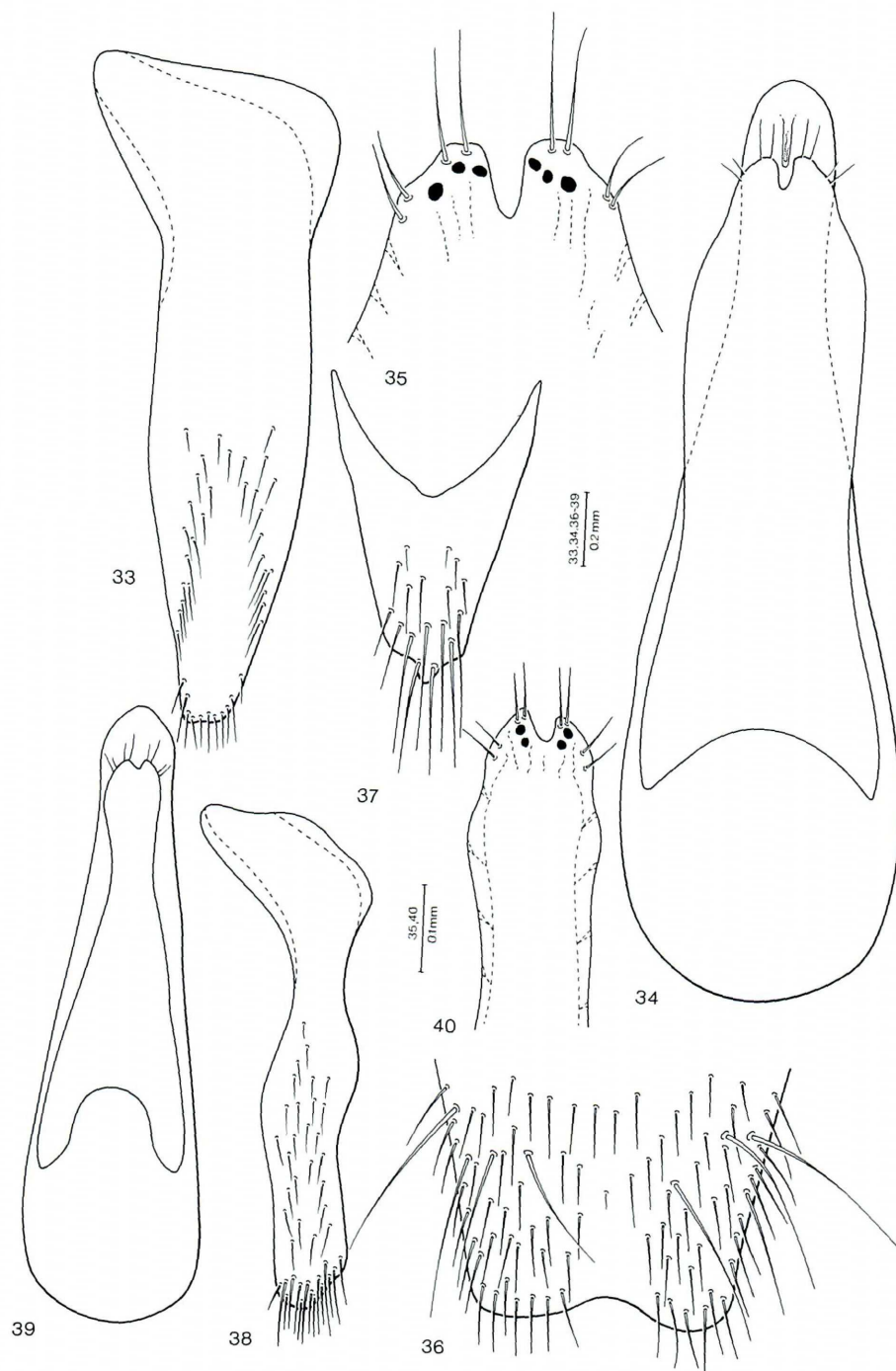
Etymology. Patronymic, the species is named in honour of Mr. J. JANATA, Praha, Czech Republic, who collected the original specimens.

Quedius (Microsaurus) lih sp. nov.

(Figs. 31–35)

Description. Head black, pronotum piceous-black with lateral portions narrowly paler, elytra dark brunneous with narrowly paler suture and apical margin, abdomen distinctly iridescent, piceous-black with narrowly, inconspicuously paler apical margins of tergites; maxillary and labial palpi pale testaceous, antennae testaceobrunneous with first segment slightly darker, legs brunneous with slightly paler tarsi, middle tibiae and hind femora distinctly darkened. Head rounded, slightly wider than long (ratio 1.12), markedly narrowed posteriad behind eyes, posterior angles entirely obsolete;

Figs. 33–40 (on p. 99). — 33–35. *Quedius lih*: 33, sternite 9 of male genital segment; 34, aedoeagus, ventral view; 35, apical portion of underside of paramere. — 36–40. *Quedius euanderoides*: 36, apical portion of male sternite 8; 37, tergite 10 of male genital segment; 38, sternite 9 of male genital segment; 39, aedoeagus, ventral view; 40, apical portion of underside of paramere.



eyes large and convex, tempora much shorter than eyes seen from above (ratio 0.34); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to postero-medial margin of eye, separated from it by distance slightly smaller than diameter of puncture, two punctures between it and posterior margin of head, situated close to posterior margin, one additional puncture between posterior frontal puncture and temporal puncture, situated at posterior margin of eye; temporal puncture separated from posterior margin of eye by distance slightly larger than diameter of puncture; tempora with numerous fine punctures; surface of head with fine and dense, superficial microsculpture of transverse waves, with some intermixed microscopical punctures. Antenna very long, slender, scarcely widened toward apex, with all segments markedly longer than wide; segment 3 distinctly longer than segment 2 (ratio 1.55), segment 4 2.25 as long as wide, following segments gradually becoming somewhat shorter, but segment 9 still 1.81 as long as wide, last segment slightly shorter than preceding two segments combined. Pronotum as long as wide, widest at about middle, slightly narrowed both anteriorly and posteriorly, with lateral margins continuously arcuate with broadly rounded base, transversely convex, lateral portions not explanate; dorsal rows each with three punctures; sublateral rows each with three punctures, posterior puncture situated about at level of large lateral puncture; microsculpture similar to that on head but finer and denser. Scutellum impunctate, with very fine and dense microsculpture of transverse waves. Elytra rather long, at base slightly narrower than pronotum at widest point, scarcely widened posteriorly, at suture as long as, at sides somewhat longer than pronotum at midline (ratio 1.15); punctuation and pubescence moderately fine and dense, transverse interspaces between punctures mostly somewhat larger than diameters of punctures; pubescence piceous; surface between punctures without microsculpture. Wings folded twice under elytra, probably functional. Abdomen with tergite 7 (fifth visible) bearing fine whitish apical seam of palisade fringe; punctuation and pubescence of abdominal tergites vaguely finer but somewhat denser than that on elytra, but becoming sparser toward apical margin of each tergite and in general toward apex of abdomen; pubescence piceous; surface between punctures with excessively fine and dense microsculpture of transverse striae.

Male. First four segments of front tarsus considerably dilated, sub-bilobed, each densely covered with modified, long pale setae ventrally; segment 2 almost patellate, markedly wider than apex of tibia (ratio 1.40); segment 4 narrower than preceding segments. Sternite 8 rather elongate, with lateral margins slightly concave at about apical third, with five long setae on each side; with shallow, subarcuate medioapical emargination, triangular area before emargination flattened and smooth (Fig. 31). Genital segment with tergite 10 elongate, narrowly triangular, narrowly arcuate apically, with numerous setae at and near apical margin, and with much smaller setae in front of them (Fig. 32); sternite 9 with large basal portion, apical portion broadly subtruncate apically, with several fine apical setae and two weakly differentiated subapical setae, and with remaining fine setation characteristically arranged into two longitudinal groups joined basally (Fig. 33). Aedoeagus (Figs. 34, 35) large, quite characteristic;

Two New Species of the Genus *Lesteva* (Coleoptera, Staphylinidae) from the Island of Dôgo of the Oki Islands, West Japan

Yasuaki WATANABE

Laboratory of Insect Resources, Tokyo University of Agriculture,
Atsugi, Kanagawa, 243–0034 Japan

Abstract Two new species of the staphylinid genus *Lesteva* are described under the names *L. shimadai* and *L. okiana*. They are obtained by sifting dead leaves accumulated at the streamside in mixed forests, consisting of deciduous and evergreen trees, on the Island of Dôgo of the Oki Islands, West Japan.

Seventeen species of the staphylinid genus *Lesteva* have hitherto been reported from Japan except for the Ryukyu Islands by SHARP (1874, 1889), CAMERON (1930) and WATANABE (1990). Through the courtesy of Mr. Takashi SHIMADA, I had an opportunity to examine two interesting species, which were obtained by sifting dead leaves accumulated at the streamside on the Island of Dôgo of the Oki Islands, West Japan. One of these species can be regarded as a member of the group of *Lesteva plagiata* for the reason of having similar body size and narrow pronotum. The other seems to be placed near *Lesteva tsushimae* in view of having similar male genital organ.

After a careful examination, it has become clear that these two species may be new to science on account of disagreement in the configuration of the male genital organ from those of the previously known species. They will be described in this paper.

Before going further, I would like to express my hearty thanks to Dr. Shun-Ichi UÉNO, Visiting Professor at Tokyo University of Agriculture, for his kind advice on the present study. Deep gratitude is also due to Mr. Takashi SHIMADA, Hoshizaki Green Foundation, Shimane, for his kindness in giving me the opportunity of studying the interesting species, and Messrs. Tomoyuki TSURU and Hiroki ONO, Laboratory of Insect Resources, Tokyo University of Agriculture, for taking the photographs inserted in this paper.

Lesteva shimadai Y. WATANABE, sp. nov.

[Japanese name: Shimada-neaka-yotsume-hanekakushi]

(Figs. 1, 3–5)

Body length: 3.4–4.1 mm (from front margin of head to anal end); 2.4–2.6 mm

(from front margin of head to elytral apices).

The present new species can readily be distinguished from the previously known species of the genus *Lesteva* on account of peculiar configuration of male genital organ.

Body spindle-shaped and somewhat depressed above. Colour black to reddish black and moderately shining, with mouthparts, two basal and two or three apical segments of antennae and legs yellow, and each elytron provided with a large subtriangular yellowish patch in anterior half.

Male. Head somewhat depressed above, apparently broader across compound eyes than long (width/length=1.23); postocular part arcuate and short, a half as long as the longitudinal diameter of each eye, which is prominent laterad; surface densely, somewhat coarsely punctured and finely pubescent, bearing a longitudinal depression on each side of the middle in front of each ocellus; ocelli relatively small, the distance between them somewhat larger than that from the outside of ocellus to the inner margin of each compound eye. Antennae elongate, though not extending beyond the middle of elytra and slightly thickened from 9th to the apicalmost segment, with two proximal segments subopaque and the remainings opaque, 1st segment robust, twice as long as broad, 2nd to 10th equal in width to one another, 2nd distinctly longer than broad (length/width=1.33) but a half as long as and a little narrower (2nd/1st=0.75) than 1st, 3rd somewhat dilated apicad, twice as long as broad and 1.5 times as long as 2nd, 4th and 5th equal in length to each other, each remarkably longer than broad (length/width=1.83) but slightly shorter than 3rd (each of 4th and 5th/3rd=0.92), 6th to 8th equal in length to one another, each distinctly longer than broad (length/width=1.67) but slightly shorter than 5th (each of 6th to 8th/5th=0.91), 9th and 10th equal in length to each other, each somewhat longer than broad (length/width=1.25) and a little broader than 8th (each of 9th and 10th/8th=1.33), 11th more than twice as long as broad, remarkably longer (11th/10th=1.80) than though as broad as 10th, subacuminate at the apex.

Pronotum subcordate and convex medially, somewhat transverse (width/length=1.11) and a little broader than head (pronotum/head=1.15), widest at anterior third and more strongly narrowed posteriad than anteriorly; lateral sides arcuate in anterior two-thirds and almost straight in posterior third, finely bordered throughout, the border continuing onto posterior margin which is truncate, anterior margin gently arcuate, anterior angles narrowly rounded though not visible from dorsal side, posterior angles rectangular though blunt at the corners; surface densely, coarsely punctured, the punctures much coarser than those of head, and covered with more distinct pubescence than those of head, provided with a shallow U-shaped depression at the middle in posterior half. Scutellum relatively small and subtriangular, surface densely, coarsely punctured and covered with fine pubescence. Elytra subtrapezoidal and dilated posteriad, a little longer than broad (length/width=1.12), twice as long as pronotum and considerably broader than pronotum (elytra/pronotum=1.61), posterior margin slightly emarginate at the middle, posterior angles broadly rounded; surface densely, coarsely punctured

median lobe markedly narrowed anteriorly, but becoming parallel-sided from about apical third, with apex arcuate, with distinct medial carina on face adjacent to paramere extended into apical emargination of paramere. Paramere quite large and wide, anteriorly much wider than median lobe, from narrowest point dilated anteriorly in almost straight line and then abruptly narrowed into apical portion with narrow medioapical emargination at apex of paramere by far not reaching apex of median lobe; two setae on each side of emargination, two shorter setae at each lateral margin below apex; underside of paramere with three sensory peg setae at each side of medioapical emargination. Internal sac without larger sclerotized structures.

Female unknown.

Length 9.5 mm.

Type material. Holotype (male): China: "CHINA W-Sichuan Ya'an Prefecture, Tianquan Co., W Erlang Shan pass, 2780 m, 21.VI.1999 29.51.27N, 102.15.47E, leg. A. Pütz, sifted". Temporarily in the SMETANA collection, Ottawa, Canada (to be eventually deposited in the Muséum d'Histoire naturelle, Geneva, Switzerland).

Geographical distribution. *Quedius lih* is at present known only from the type locality in Erlang Shan in western Sichuan.

Bionomics. No details are known about the habitat, from which the holotype was sifted.

Recognition and comments. *Quedius lih* is a member of the *Euryalus* Group (see SMETANA, 2001 b, 208). It is quite distinctive due to its rather large size and the very long antennae, the characteristically developed sclerites of the male genital segment (Figs. 32, 33), as well as the distinctive aedeagus (Figs. 34, 35). It shares the characteristic setation of the male sternite 9 with three other species: *Q. euryalus* SMETANA, 1997 a, *Q. faang* SMETANA, 1999 c, and *Q. haw* SMETANA, 2001 a; these four species form a monophyletic subgroup within the *Euryalus* Group, based on this character state.

Etymology. The specific epithet is the Chinese word "lih", which means "handsome". It refers to the appearance of the species.

Quedius (Microsaurus) euanderoides sp. nov.

(Figs. 36–40)

Description. In all external characters similar to *Q. euander* SMETANA, 1997 a, but different as follows: size slightly larger, body form somewhat stouter. Coloration similar, but in general darker, particularly pronotum and elytra; legs dark brunneous with distinctly darkened middle and hind tibiae. Head larger and slightly wider (ratio 1.18). Pronotum more voluminous, wider, slightly wider than long (ratio 1.10). Elytra somewhat longer, at suture about as long as, at sides slightly longer (ratio 1.12) than pronotum at midline. Wings fully developed. Punctuation of elytra and abdominal tergites in general denser.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each